REMARKS

Formal Matters

Applicants thank the Examiner for the telephone interview on April 20, 2006. During the interview, the rejection of claim 19 under 35 U.S.C. § 112, first paragraph, as described at pages 7-9 of the Office Action, was discussed. Applicants questioned whether there was both a written description and enablement rejection or if there was only an enablement rejection. The Examiner confirmed that claim 19 was rejected as failing to comply only with the enablement requirement under 35 U.S.C. § 112, first paragraph.

Applicants have amended claims 6, 10, 12, 15, 18, and 23. No new matter has been added by way of these amendments.

Claims 10-13, 15, and 19-24 are currently pending.

Enablement Rejections

The Office rejected claims 10 and 15, because allegedly "undue experimentation would be required to test all claimed possible metals and amino acids, since experimentation data only provides glycine and NaCl, and no other experimental data is presented. Also, an undue experimentation would be necessary to find out the conditions for stabilization of the concentrate precursor." (Office Action at pages 5-6.) The Office also rejected claim 19, because allegedly the Specification "does not reasonably provide enablement for all amino acids and all metal salts." (Office Action at pages 7-8.) Applicants respectfully traverse.

Applicants have amended claim 15 to recite "stabilizing the concentrate or a precursor product produced during said process with at least one of sucrose, glycine, calcium ions, and albumin." One of skill in the art would be able to make and use the claimed invention, as amended. Stabilization of the complex is described in the Specification at, for instance, page 8, lines 34-39, page 10, lines 1-3, and page 18, lines 35-39. In light of these teachings in the Specification, one of skill in the art would be able to both make and use a more stable factor VIII:C-containing von Willebrand factor concentrate or concentrate precursor.

Applicants also respectfully assert that undue experimentation would not be required to test the claimed amino acids and alkaline earth metal and alkali metal salts. Section 2164.06 of the M.P.E.P. states that "the test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed." (citing *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988)) (emphasis added). Applicants respectfully assert that fractional precipitation methods were known to one of ordinary skill in the art. Further, the specification provides ample guidance with respect to any necessary experimentation. Such teachings can be found at, for instance:

- Choice and preparation of starting material is described on pages 6-7 of the specification.

- The specification at pages 7-9 teaches how to obtain the concentrate of the invention by precipitation, including particular concentration ranges of precipitants.
- Example 1 (specification at pages 9-11) teaches fractional precipitation of the vWF/FVIII:C concentrate. Example 1 also teaches analysis of the precipitates for vWF:RCoF activity, which measures the functional activity of vWF, as well as measurement of vWF:Ag and FVIII:C concentrations.
- Example 2 (specification at pages 11-14) teaches a first and a second precipitation, each precipitation followed by a measurement of vWF activity.
- Example 3 (specification at pages 14-16) teaches precipitation of the vWF/FVIII:C fraction with the same NaCl/glycine concentration, but with varying addition and incubation times.
- Example 4 (specification at pages 16-18) teaches fractional precipitation of the vWF/FVIII:C concentrate and, at the same time, teaches a first and second precipitation.
- Example 5 (specification at pages 18-21) teaches stabilization, sterilization, and lyophilization of a fraction enriched with high molecular weight vWF multimers. Example 5 also teaches the production of a vWF/FVIII:C concentrate in which the vWF high molecular weight markers were reduced.
- Example 6 (specification at page 22) demonstrates fractional precipitation of high molecular weight vWF multimers from a supernatant containing recombinant FVIII:C and plasma vWF.

In light of the large amount of guidance provided by the specification regarding production of a concentrate and the optimization of conditions, the amount of experimentation would not be undue. In *United States v. Telectronics, Inc.*, 857 F.2d 778 (Fed Cir. 1988), the court ruled that since one embodiment (stainless steel electrodes) and the method to determine dose/response was set forth in the specification, the specification was enabling. The question of time and expense of such studies, approximately $50,000 and 6-12 months standing alone, failed to show undue experimentation. The specification in this case discloses the use of glycine and NaCl and describes methods to optimize their use in producing a concentrate of a factor VIII:C-containing von Willebrand factor. Thus, other amino acids and alkali metal or alkaline earth metal salts can be easily tested to select the conditions that result in an increased content of functional, high molecular weight vWF multimers. No undue experimentation is required. Therefore, Applicants respectfully request that the Office withdraw the enablement rejection of claims 10, 15, and 19.

Indefiniteness Rejections

The Office rejected claims 10 and 15 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. (Office Action at page 6.) Specifically, the Office rejected claim 10 because "the value for the ratio 'greater than 1' is not provided." *Id.* Applicants respectfully traverse.

The primary purpose of the "requirement of definiteness of claim language is to ensure that the scope of the claims is clear so the public is informed of the boundaries of what constitutes infringement of the patent." M.P.E.P. § 2173. The public would

clearly understand that claim 10 requires that the vWF:RcoF activity is greater than the vWF antigen concentration. The boundary of the claim is clear, as a vWF:RcoF activity that is less than or equal to vWF antigen concentration does not meet the requirements of claim 10. Thus, the ratio of "greater than 1" language of claim 10 fulfills the primary purpose of the definiteness requirement.

In addition, the M.P.E.P. states:

> Definiteness of claim language must be analyzed, not in a vacuum, but in light of:
>
> (A) The content of the particular application disclosure;
>
> (B) The teachings of the prior art; and
>
> (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

M.P.E.P. § 2173.02. Under this analysis, a ratio of the vWF:RcoF activity to the vWF antigen concentration of greater than 1 would be well within the knowledge of a practitioner of ordinary skill. One of ordinary skill in the art would understand in light of the specification that the vWF:RcoF activity must be greater than the vWF antigen concentration. The ratio is simply calculated as an indicator of vWF activity, based on the total amount (either active or inactive) of vWF present. The Office has not explained why the "greater than 1" claim language does not have a reasonable degree of clarity and particularity, but merely states that "a reasonable range should be provided to make the claim definite." (Office Action at page 6.) Applicants respectfully submit that the "greater than 1" claim language is reasonably clear and precise and fulfills the purpose

of the definiteness requirement. Therefore, Applicants request that the Office withdraw the indefiniteness rejection of claim 10.

The Office rejected claim 15 because allegedly the term "precursor" is indefinite. Specifically, the Office asserts that the term is indefinite because "the structure or name of the precursor is not provided in the claim." (Office Action at page 6.) Applicants respectfully traverse.

The M.P.E.P. states:

> Definiteness of claim language must be analyzed, not in a vacuum, but in light of:
>
> (A) The content of the particular application disclosure;
>
> (B) The teachings of the prior art; and
>
> (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

M.P.E.P. § 2173.02. Further, "[i]n reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole." *Id.* The full phrase in claim 15, "or a precursor product produced during said process," refers back to the entire process of claim 10 and precursors to the concentrate produced therein. Applicants respectfully assert that one of ordinary skill in the art would understand that claim 10 and therefore dependent claim 15 are directed to a "process for producing a concentrate." Therefore, a "precursor product" is any substance that precedes the final formation of the concentrate and that which is derived from a "liquid comprising factor VIII:C and von Willebrand factor." The term "precursor" is especially clear to one of skill in the art when read in light of the specification, in which there are specific examples of

stabilizing and pasteurizing a precursor product. (See, *e.g.* page 9, line 34 to page 10, line 5.)

The term "precursor" is defined in one dictionary as "a substance, cell, or cellular component from which another substance, cell, or cellular component is formed." Merriam-Webster's Collegiate Dictionary 915 (F.C. Mish ed., 10th ed. 2001). One of ordinary skill in the art would understand that stabilization or pasteurization of the factor VIII:C and von Willebrand factor liquid can occur at any time before the final concentrate is produced. Claim language is not analyzed in a vacuum. One of ordinary skill in the art, reading the claim as a whole and in light of the specification would be apprised of the scope of the claim. Based on these arguments, Applicants request that the indefiniteness rejection of claim 15 be withdrawn.

The Office newly rejected claim 12 under 35 U.S.C. § 112, second paragraph, as being indefinite. (Office Action at page 10.) Applicants have amended claims 6, 12, 18, and 23, by replacing "alkaline earth" with "alkali." Therefore, Applicants respectfully request that the Office withdraw the indefiniteness rejection of claim 12.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, thereby placing claims 10-13, 15, and 19-24 in condition for allowance. Applicants submit that the proposed amendments of claims 6, 10, 12, 15, 18, and 23 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner. Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is both enabled and the claim language is definite. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: May 3, 2006

By Amy E. Purcell
Amy E. Purcell
Reg. No. 53,492